

In the Claims

Please amend the claims as follows.

1-65. (Canceled)

66. (Currently Amended) A composition, comprising: at least one isolated nucleic acid molecule that encodes at least one polypeptide that catalyzes at least one step in the synthesis of at least one bryopyran ring, a portion of a polyketide synthase type I or the complement thereof of the at least one isolated nucleic acid molecule, wherein the at least one polypeptide comprises portion includes a domain having at least one activity of a polyketide synthase type I, and wherein the at least one nucleic acid molecule hybridizes under hybridization conditions of 0.015 M NaCl/0.0015 M sodium citrate, 0.1% SDS at 50°C to SEQ ID NO:37 or the complement thereof after washing in 0.015 M NaCl/0.0015 M sodium citrate, 0.1% SDS at 50°C.

67. (Previously Presented) The composition of claim 66, wherein the at least one bryopyran ring comprises at least one bryostatin.

68-69. (Canceled)

70. (Previously Presented) The composition of claim 66, wherein the at least one nucleic acid molecule is a nucleic acid of *Candidatus*.

71. (Previously Presented) The composition of claim 70, wherein the *Candidatus* comprises at least one *Endobugula*.

72. (Previously Presented) The composition of claim 71, wherein the *Endobugula* is *Endobugula sertula*.

73. (Previously Presented) The composition of claim 66, wherein the nucleic acid molecule is a nucleic acid found in *Bugula* or a symbiont thereof.

74. (Previously Presented) The composition of claim 73, wherein the *Bugula* is *Bugula neritina*, or *Bugula pacifica*.

75-87. (Canceled)

88. (Previously Presented) An isolated nucleic acid molecule comprising SEQ ID NO: 37, or the complement thereof.

89. (Canceled)

90. (New) The composition of claim 66, wherein the activity is selected from the group consisting of an acyl carrier protein (ACP), ketosynthase (KS), dehydratase (DH), or ketoreductase (KR).

91. (New) The composition of claim 66, wherein the nucleic acid molecule has 80% nucleic acid sequence identity to SEQ ID NO:37 or the complement thereof.

92. (New) The composition of claim 66, wherein the nucleic acid molecule has 90% nucleic acid sequence identity to SEQ ID NO:37 or the complement thereof.